HIV therapy and management

PD 56 TREND OF ESTIMATED GLOMERULAR FILTRATION RATE IN A LARGE COHORT OF HIV MOTHER-TO-CHILD INFECTED PATIENTS, AN OBSERVATIONAL MULTICENTER STUDY FROM 2010 TO 2018

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Background: People vertically infected with HIV (PVI-HIV) are a special population, due to exposition since birth to HIV and antiretroviral therapy (ART). Among ART, Tenofovir disoproxil fumarate (TDF) was widely used in recent years, but there are few data on safety in these patients; in particular, data about estimated glomerular filtration rate (eGFR) trend in this population. Aim of our study is to evaluate eGFR trend in a multicentre cohort of PVI-HIV exposed to TDF.

Material and methods: Observational retrospective multicentre study, performed from 2010 to 2018. We enrolled PVI-HIV in follow up in Genoa and Brescia. In Genoa, we collected data of creatinine (mg/dL), height, weight and ART from the MedInfo online platform enclosed in Ligurian HIV Network (www.reteligureHIV.it), in Brescia, from the electronic medical record NetCare. We calculated eGFR with the Cockroft-Gault equation in adult and the revised Schwartz equation in underage. We matched data with ART (TDF, tenofovir alafenamide [TAF], protease inhibitor [PI]). We divided patients in 3 groups according to baseline eGFR (mL/min) at 2010 (A: ≥120, B: 80-119, C: <80).

Results: We enrolled 72 patient, 12 of them were excluded for lacking data. The average time of observation was 8 years [range 4-9]. Thirty-five patients (58%) was female, average age 19 years [range 6-27]. 51 patients (85%) received TDF at least 1 year, 32 (53%) associated TDF+PI at least 1 year, 9 (15%) never assumed TDF, 32 (53%) switched to TAF in 2018. We observed an average eGFR reduction of 20.1 mL/min (2.23 mL/min/year) (Fig. 1), this reduction was greater in TDF+PI group (2.56 mL/min/year) while it was lower in those never exposed to TDF (1.66 mL/min/year). Interestingly, a slight eGFR increase emerged in TAF-exposed patients (2.4 mL/min) between 2017 and 2018, absent in the overall population. Among the eGFR groups, there was 26 patients (43%) in group A, 29 (48%) in group B and 5 (8%) in group C; we observed an eGFR reduction greater in group A (3.7 mL/min/year) and group B (1.24 mL/min/year) and a slight reduction in group C (0.4 mL/min/year).

Conclusions: Our study reveals a progressive eGFR reduction, as expected, in PVI-HIV and exposed to ART. Despite the long-term ART exposure is an interesting data the slight reduction of renal function in the worst eGFR group, even if on TDF-containing regimens. More data are needed to confirm the improvement observed after the TAF introduction; however, based on these data, we suggest a constant evaluation of eGFR in these setting.